

GENERAL ORDER NO. 96B-99787C  
WORK RELEASE AUTHORIZATION NO.: Y-03

810

**DRAFT**  
**REMEDIAL INVESTIGATION REPORT**  
**INSTALLATION RESTORATION PROGRAM SITES**

FOR  
NORTON AIR FORCE BASE  
SAN BERNARDINO, CALIFORNIA

**Volume 1 - Text**

Prepared for  
MARTIN MARIETTA ENERGY SYSTEMS, INC.  
HAZWRAP  
OAK RIDGE, TENNESSEE 37831  
and  
UNITED STATES AIR FORCE HEADQUARTERS  
AIR FORCE BASE DISPOSAL AGENCY  
NORTON AIR FORCE BASE  
CALIFORNIA 92409

Prepared by  
CDM FEDERAL PROGRAMS CORPORATION  
301 HOWARD STREET, SUITE 910  
SAN FRANCISCO, CALIFORNIA 94105

June 4, 1992  
Revision 0

DOCUMENT CONTROL NO. 7900-003-DR-CBWB

DRAFT  
REMEDIAL INVESTIGATION REPORT  
INSTALLATION RESTORATION PROGRAM SITES  
NORTON AIR FORCE BASE

CERTIFICATION

THIS DOCUMENT WAS PREPARED UNDER THE  
DIRECTION AND SUPERVISION OF A QUALIFIED  
PROFESSIONAL GEOLOGIST



*Ken Black*

---

KEN BLACK  
PROJECT GEOLOGIST  
PROFESSIONAL GEOLOGIST

## EXECUTIVE SUMMARY

810 57

### INTRODUCTION

This report presents the results of a Remedial Investigation (RI) conducted at Norton Air Force Base (AFB) between June 1991 and April 1992. The work presented in this report was implemented to evaluate potential environmental concerns related to former hazardous materials storage, handling, and disposal practices at previously identified Installation Restoration Program (IRP) sites at Norton AFB.

Norton AFB is located in the city of San Bernardino, San Bernardino County, California. Since 1982, Norton AFB has been the subject of a series of environmental investigations related to hazardous materials handling, storage, and disposal. In 1987 Norton AFB was placed on the U.S. Environmental Protection Agency's (EPA) National Priorities List (NPL) of hazardous waste sites and therefore the base as a whole was identified as an NPL "Site." This designation dictated that a Remedial Investigation and Feasibility Study (RI/FS) be conducted, meeting the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA) (42 U.S.C. §§9601, et seq.), and the National Contingency Plan (NCP) (40 CFR Part 300). To facilitate the RI/FS process at Norton AFB, the U.S. Air Force (USAF), EPA, and the State of California entered into a federal facilities agreement (Interagency Agreement or IAG) in 1989.

The primary objectives of the RI Report are as follows.

- To present the results of past and current field and records investigations conducted for the 22 IRP sites as well as a summary of concurrent environmental investigations being performed at Norton AFB.

- To describe the physical characteristics of Norton AFB and the surrounding areas.
- To present analytical data collected during the previous and current field investigations (i.e., nature and extent of contamination) for the 22 IRP sites.
- To characterize and define the extent of groundwater contamination associated with the IRP sites and with Norton AFB (the Site).
- To discuss fate and transport of the compounds of interest.
- To present a baseline risk assessment for Norton AFB based on analytical data.
- To provide required information for the Norton AFB IRP Sites FS.

#### BACKGROUND

History. Norton AFB is located in the city of San Bernardino, California, 55 miles east of Los Angeles and 60 miles west of Palm Springs. Between 1942 and 1966 Norton AFB was an aircraft maintenance center. During the 1950s and 1960s, the base also provided maintenance and logistics for liquid fuel Intercontinental Ballistic Missiles and space booster systems in the Air Force's inventory (Engineering-Science, 1982). In June 1966 Norton AFB became a Military Airlift Command (MAC) base, and became the headquarters for the 63rd Military Airlift Wing (MAW). Norton AFB is one of several military bases identified for closure in 1989 by the DOD. Closure of some operations now located at Norton AFB is scheduled for completion in 1994.

Physical Description. For purposes of discussion, Norton AFB has been divided into three geographical areas: the Central Base Area (CBA), the Industrial Waste Treatment Plant (IWTP) and the Golf Course Area (GCA), and the Northeast Base Area (NBA). The CBA is where aircraft and vehicle maintenance and repair work is performed; where aircraft are stored, prepared for flight, and

transportation of waste. Investigations supporting RCRA closure have been performed by M. B. Gilbert Associates. Detailed information regarding the closure of this facility is presented in the RCRA Closure Plan for the Defense Reutilization and Marketing Office at Norton Air Force Base (Gilbert Associates, 1991a). At the time of release of this RI report the RCRA Closure Plan was under review by the State of California and comments are not expected until December 1992.

#### **2.3.5 RCRA Closure Plan for the IWTP**

The IWTP is also being closed as a RCRA facility. The Plan for Closure of the IWTP is presented in the document RCRA Closure Plan for the Industrial Waste Treatment Plant at Norton AFB (Gilbert Associates, 1991b). At the time of release of this RI report the RCRA Closure Plan was under review by the State of California and comments are not expected until December 1992.

#### **2.3.6 UST Removal Program**

Norton AFB is presently in the process of surveying and pulling all USTs at the base. A summary of the status of USTs at Norton AFB is included in the document Summary of Results of Basewide Underground Storage Tank Survey Norton AFB, (TetraTech, 1992).

#### **2.3.7 Basewide Asbestos Program**

Norton AFB has completed its investigation of asbestos-containing material at the base. Results of these asbestos investigations are reported in Norton Asbestos Register (TETC, July 1991).